

# **Joo Byung Chae**

jc5884 / MSAAD

GSAPP Works 2022-2023

## STUDIO

### 1. UPPER-LAYERED CITY

AAD Advanced Design Studio

### 2. VARICLE

AAD Advanced Studio V

### 3. CARVING MEMORY

AAD Advanced Studio VI

## ELECTIVE

### 4. ARGUMENT

AAD Required

### 5. TRANSSCALARITIES

AAD Required

### 6. MAKE

Visual Studies

### 7. ARCHITECTURAL PHOTOGRAPHY

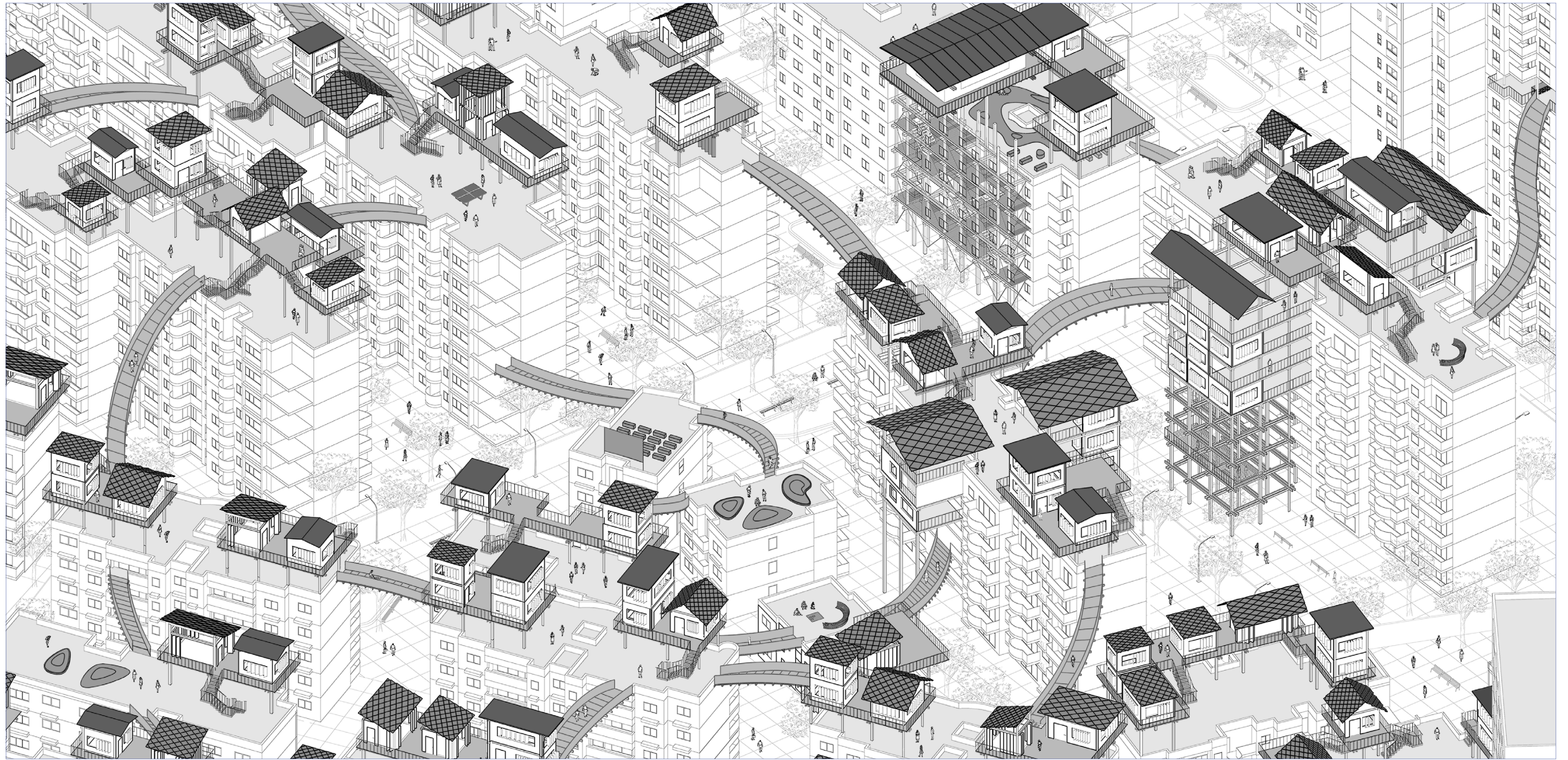
Visual Studies

### 8. THE HISTORY OF ARCHITECTURAL THEORY

History and Theory Modern

### 9. RE-THINKING BIM

Building Science and Technology



# 1. UPPER-LAYERD CITY

## Self-Constructed Houses on Existing Apartments

Year: 2022

Location: Shanghai, China

Type: project housing

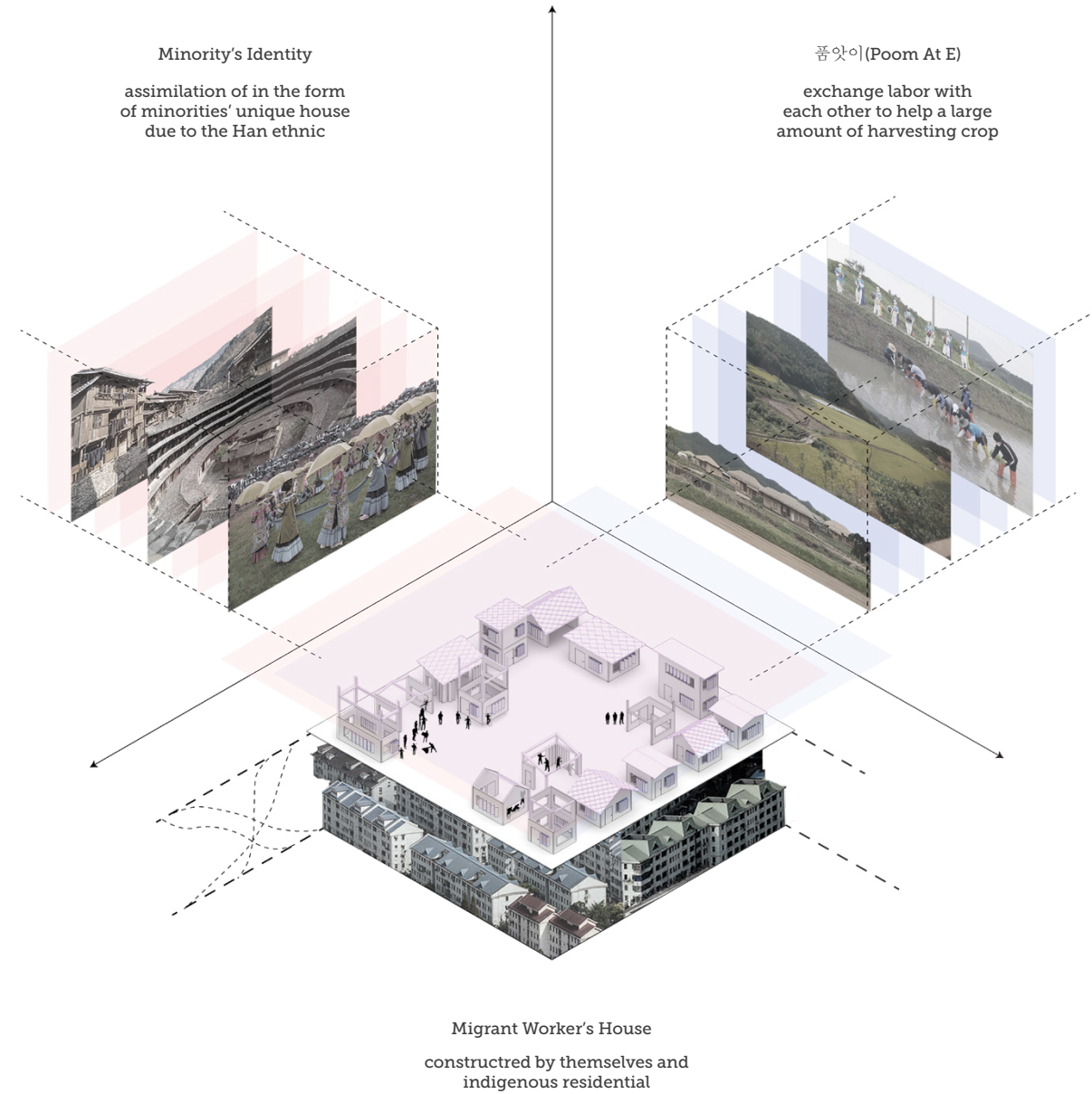
Category: academic project(AAD Advanced Design Studio)

Instructor: Elias and Yousef Anastas(AAU Anastas)

Role: group work with Harlan Luo

Using maps, texts and drawings, we tried to reveal the analogical relations between forms, techniques, territories and materials across time and space. These are notes observing our surrounding architectural world and its relations with its milieu. The notes trace architectural practices to enlighten disregarded lectures of architectural history. We, who grew up in East-Asian cultures, considered how to apply our non-architectural indigenous customs, so to say know-how, to today's architecture.

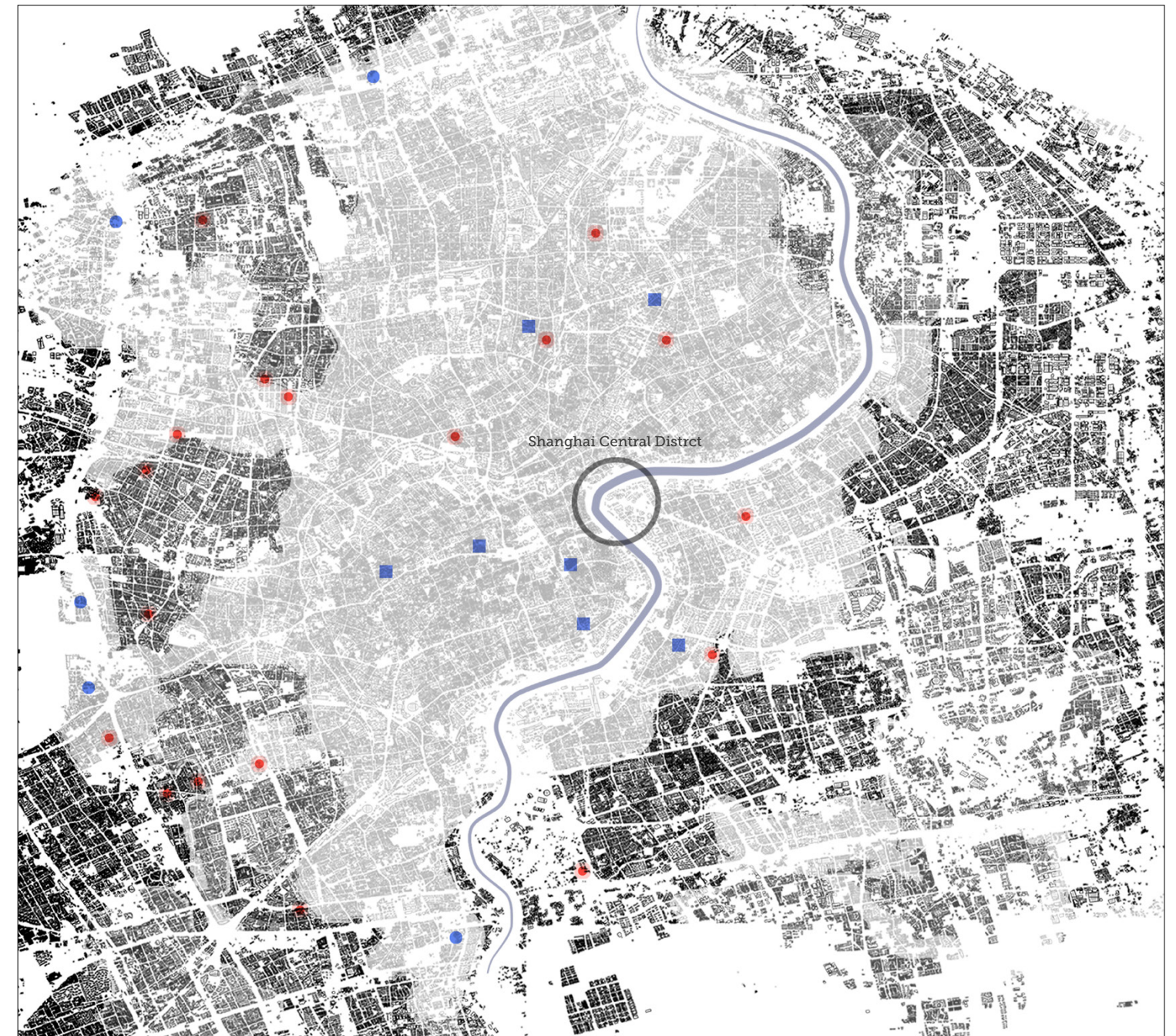
## Minority's Housing Identity and Exchanging Labor



### Self-Constructed and Indigenous House

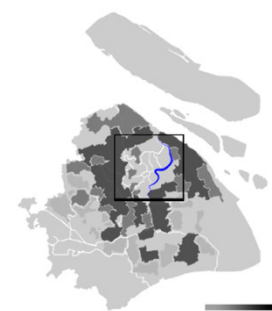
품앗이 is the exchange of labor in the past agricultural society in Korea. In China, the culture of minorities, also architecture, has been assimilated to the Han ethnic although they have indigenous culture. Combining these two ideas, we elicited self-constructed, indigenous house and applied to Shanghai, one of the biggest cities of China by constructing their houses themselves.

## Migrant Worker's Reality; Living Edge of Shanghai



Non-Registered Population  
 15,000 40,000

■ Demolished Residential  
 ● Newly Planned Residential  
 ● Minority Settlement



Migrant workers mainly live outside of the city



Even on edge of the city, they live in poor condition



They have been pushed out toward outside of cities



In center of the city, dwellings have already been formed

## Construction Manual

1



Government cooperates with architects and helps migrant workers to finish whole construction process

2



Before constructing houses, migrant workers discuss with architects about location, material, structure, etc

3



Migrant workers are received construction education. After understanding simple structure and materials, they start constructing. Complex education is not required because for their housing structures are only for 1 or 2 level buildings built on existing apartment columns

4

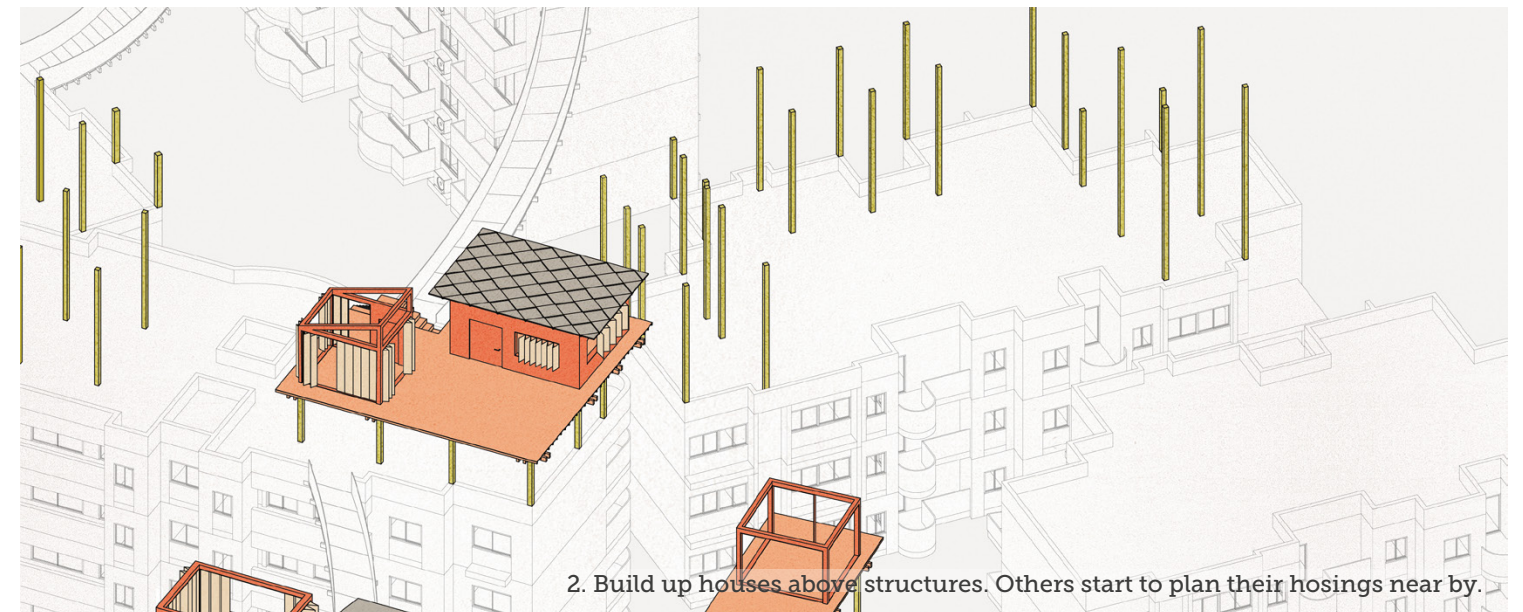


After training, future residents are put into the construction site. House is built depending on their situation, such as the number of people, or existing column structure.

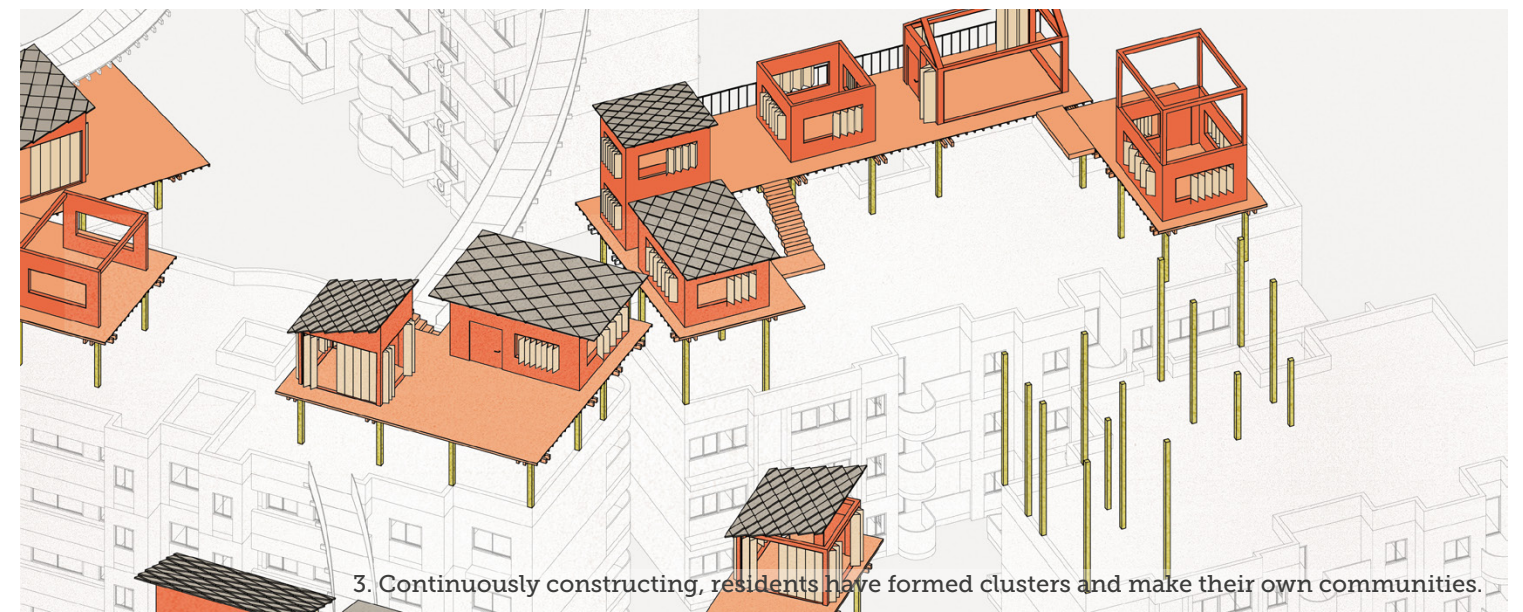
## Construction Process



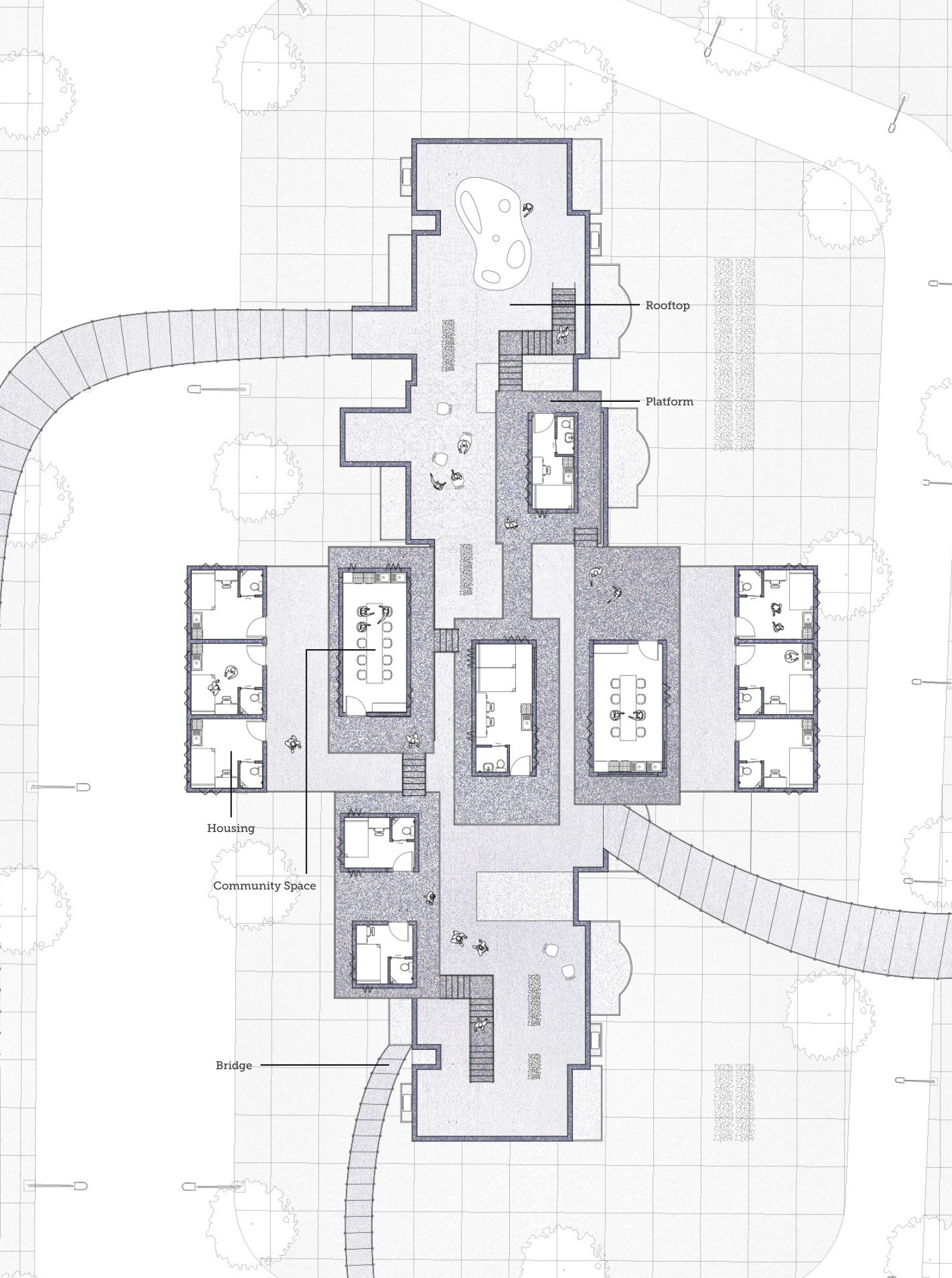
1. Construct structures for migrant worker's houses, lengthening existing columns.



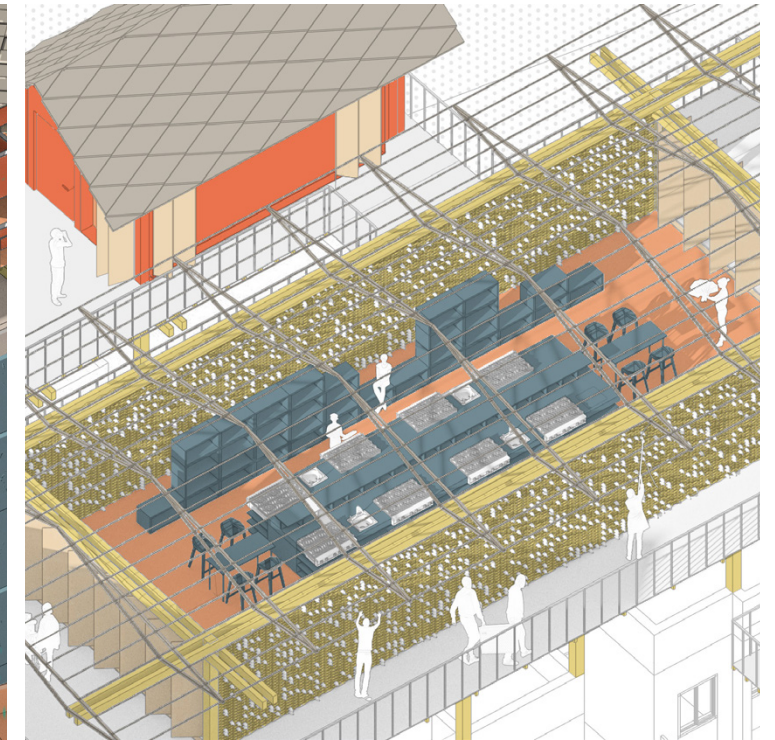
2. Build up houses above structures. Others start to plan their housing nearby.



3. Continuously constructing, residents have formed clusters and make their own communities.



Vertically expanded areas are used not only for houses. They can also be as stairs or community spaces.



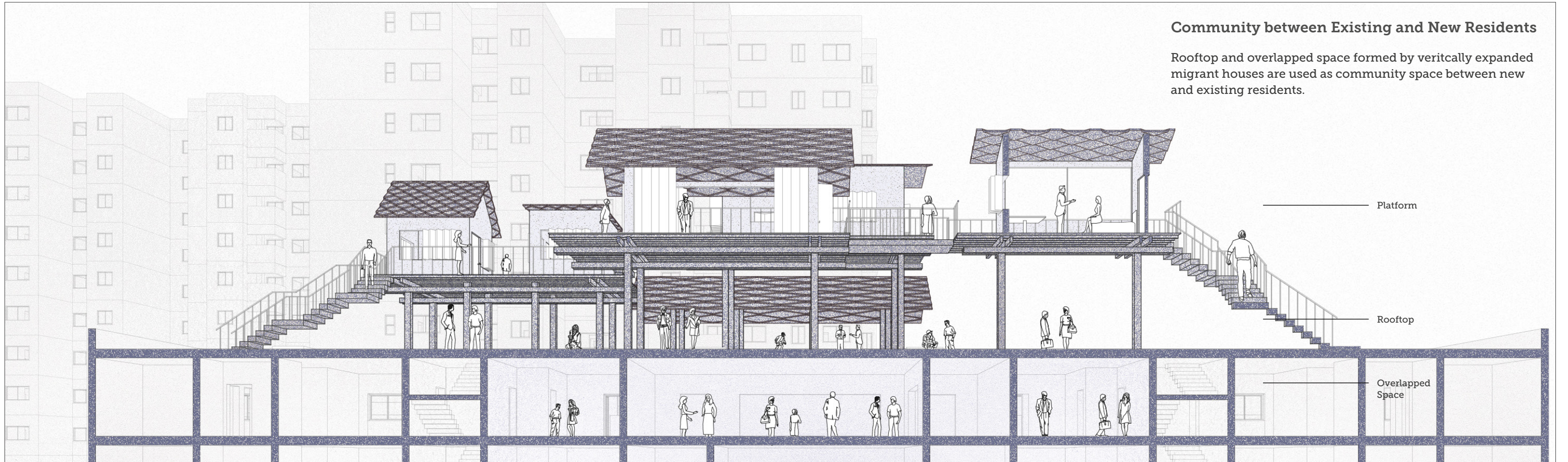
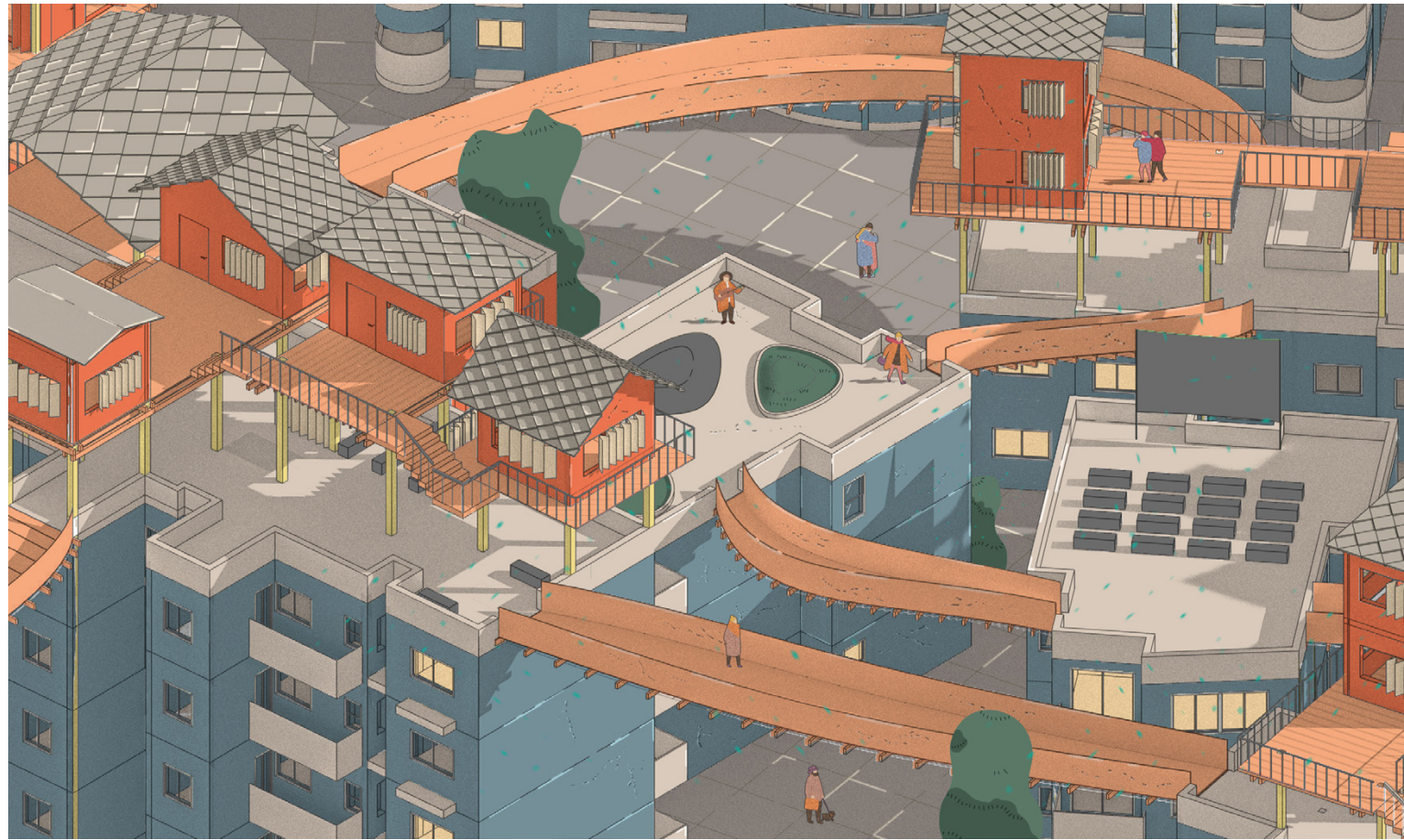
At the center of migrant housings, there are community spaces considered as minorities' identity.



In rooftops, new residents help each others to settle in a community well, sharing works.



People outside of apartments can also visit community spaces to interact with residents.





## 2. VARICLE

### Combination of Vertical Movement Devices

Year: 2022

Location: New York, United States

Type: street intervention

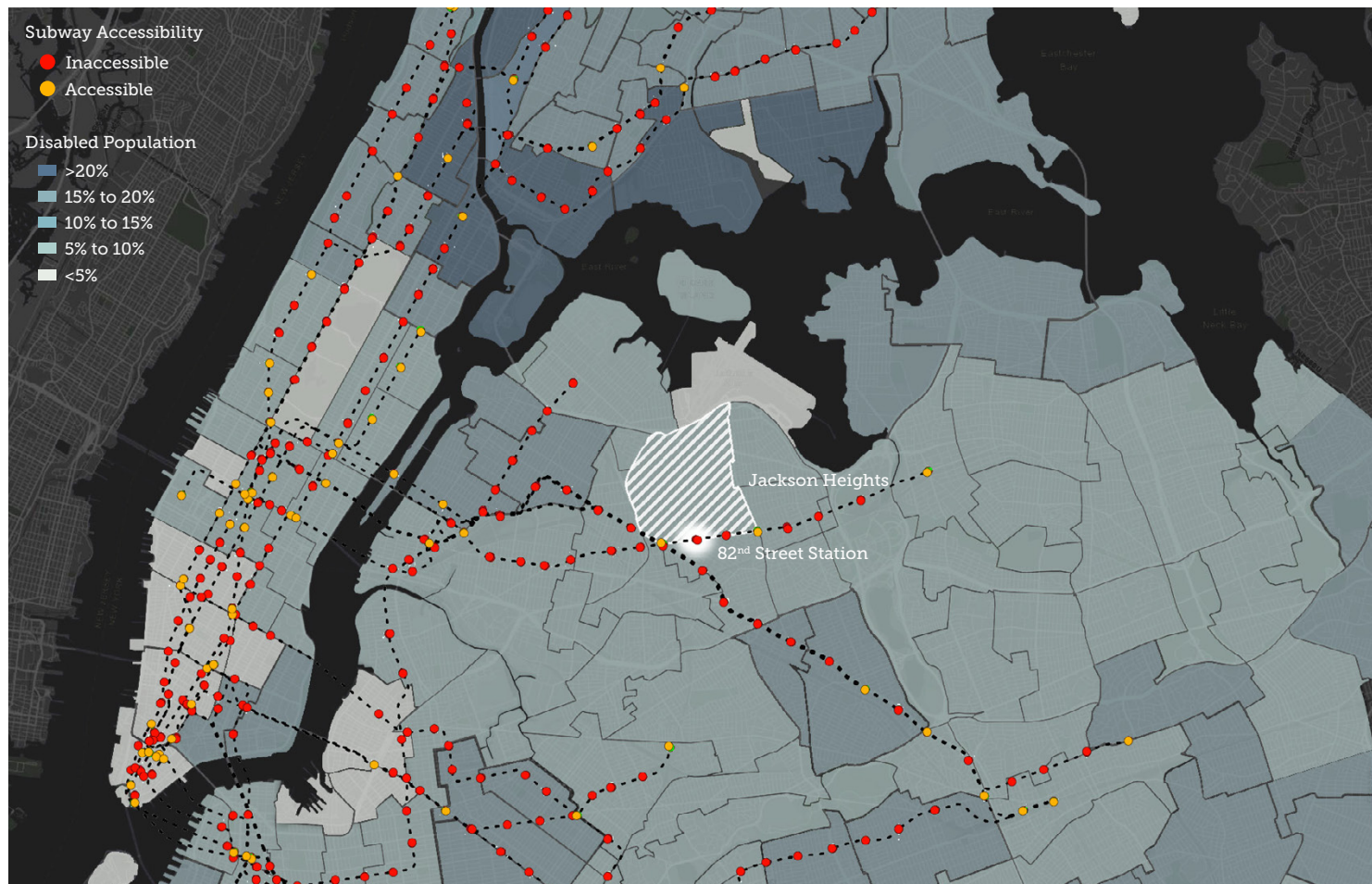
Category: academic project(AAD Advanced Studio V)

Instructor: Jing Liu(SO-IL)

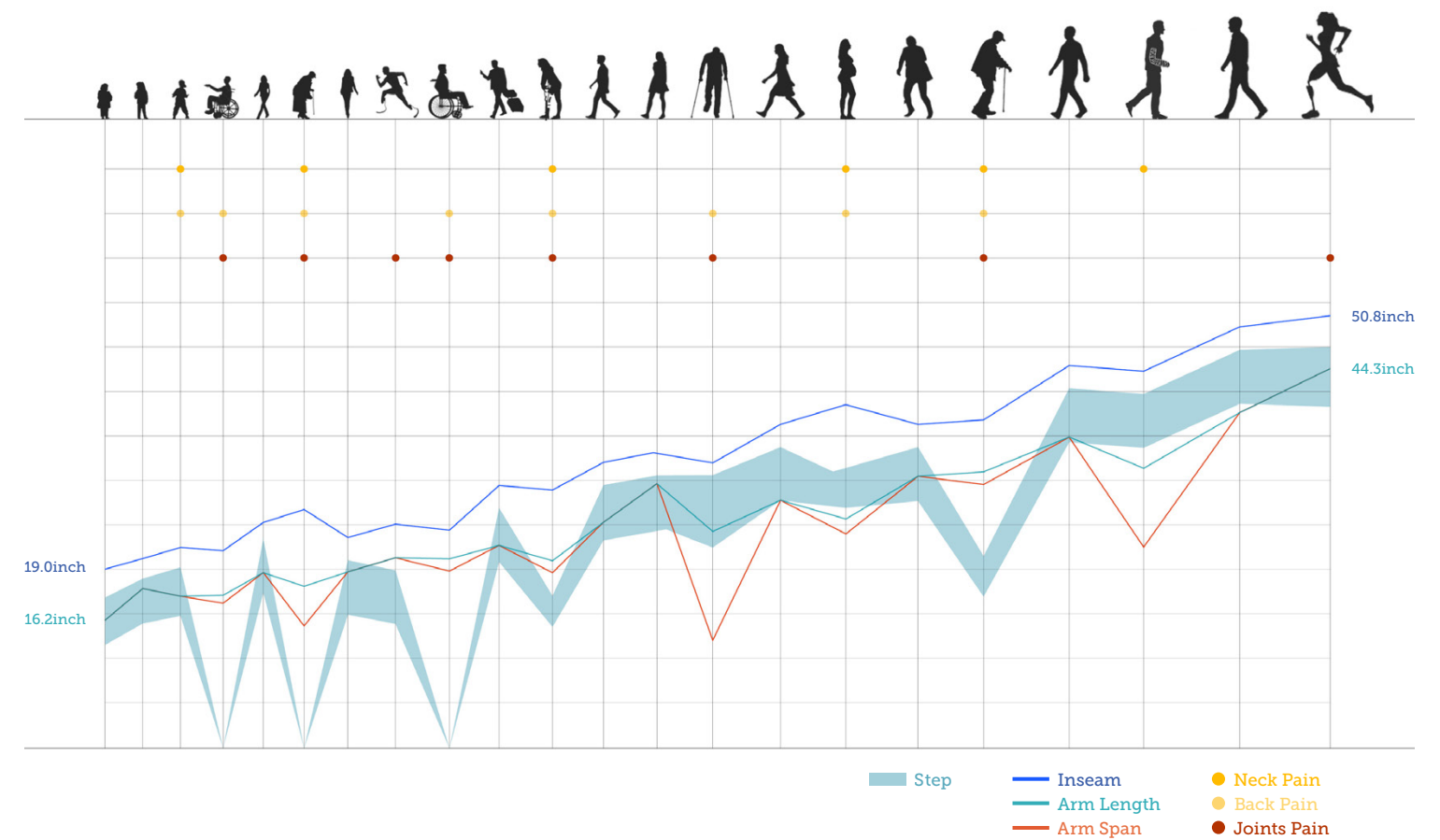
Role: individual work

People used to say how others see 'community' is very different from the lived experience from within. Tying to go deep into the colorful neighborhood of Jackson Heights, I embed myself in the community and on the streets and addressed real worries, matters of concern, and issues that people care for. I focused on the current status of the 82nd street station, where there is no elevator, and reinterpret the meaning of the vertical movement devices in terms of accessibility.

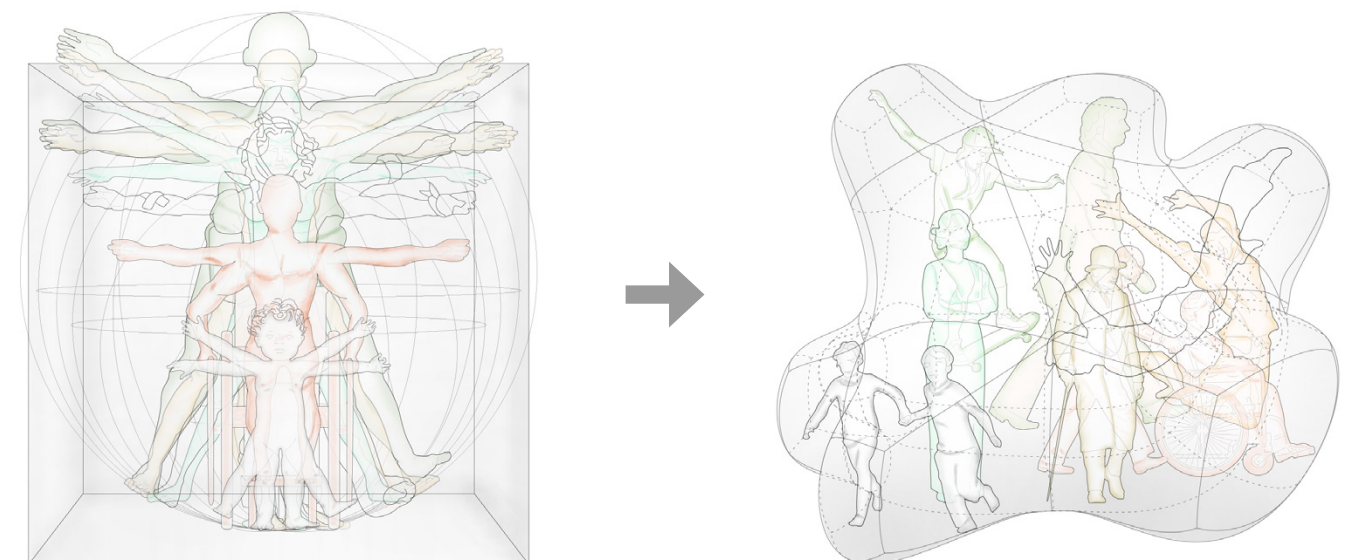




### Physical Gradation



### Devices for Various People



Jackson where people from various cultures are living together started being developed in early 20th century and now, over 100 years from the moment, is facing facility aging. The 82<sup>nd</sup> Street station is experiencing the same problem. In the case of public elevators, they only meet the minimum standards. They are usually considered dirty and designed for physically disabled. However, everyone has different body structures. We cannot classify not just between the disabled and non-disabled. Also, depending on your condition, your physical condition may change. Considering all these aspects, I would like to put diverse devices rather than just an elevator so that people can use the devices according to their current states.



### Manuel Triangle

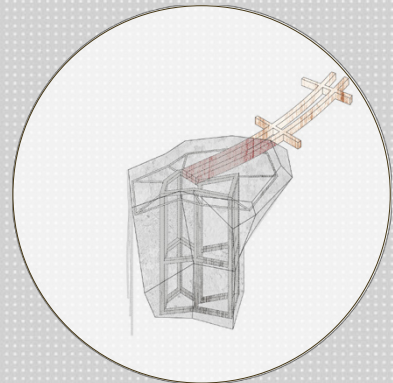
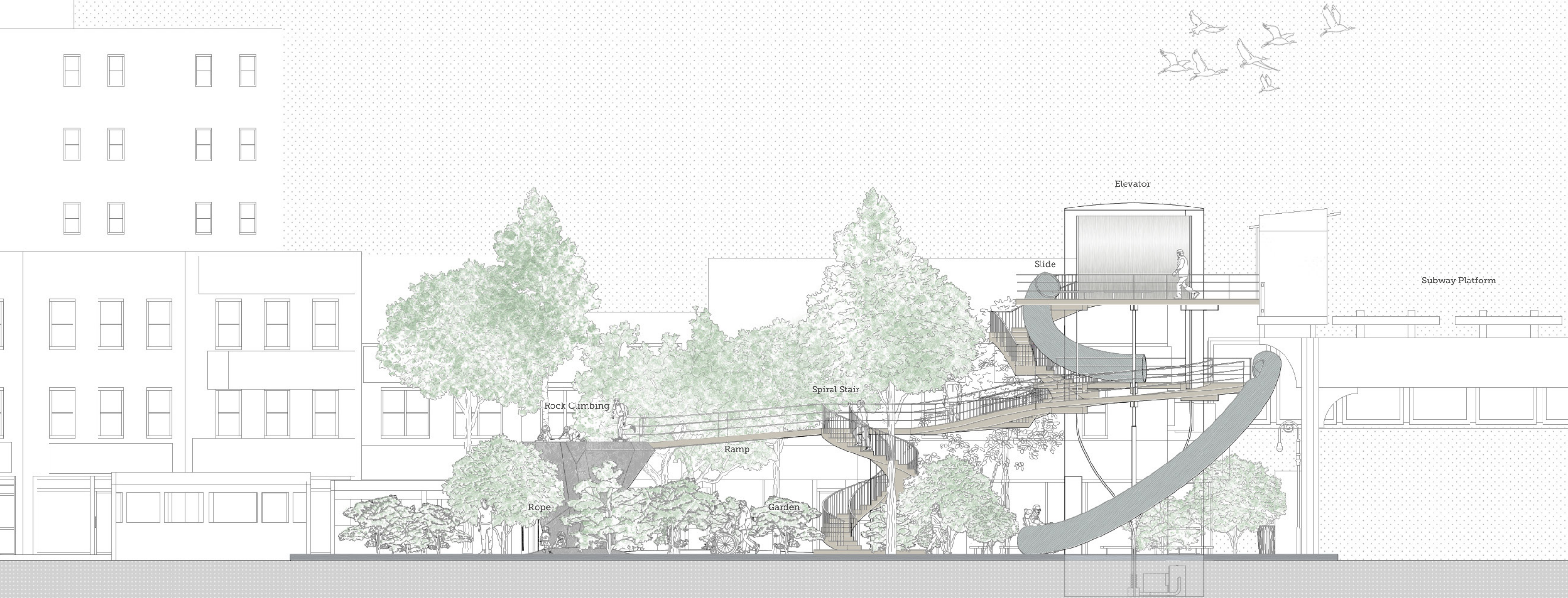
Manuel Triangle, a block away from 82<sup>nd</sup> Street Station, is the only place having enough space to install devices around the station. Northern part of the block is facing subway platform. Divide the vertical distance, from the ground to the subway platform, and place vertical devices in divided distances. People can select devices according to their condition or preference.



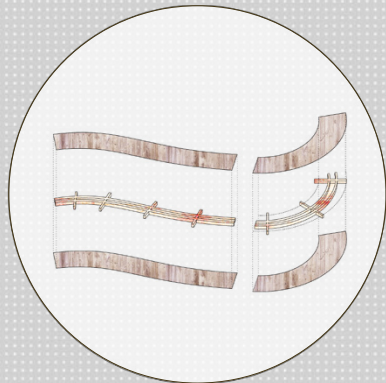
### Types of Vertical Devices

Ramp connects all devices, allowing people to select devices according to their occasion and preference. Also, bushy garden, continuously serving as a gathering plaza like before, harmonizes with devices, giving exotic experience while using devices.

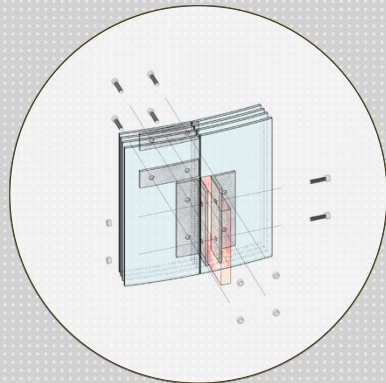
Section



Beams - Elevator Shaft Connecting Structure

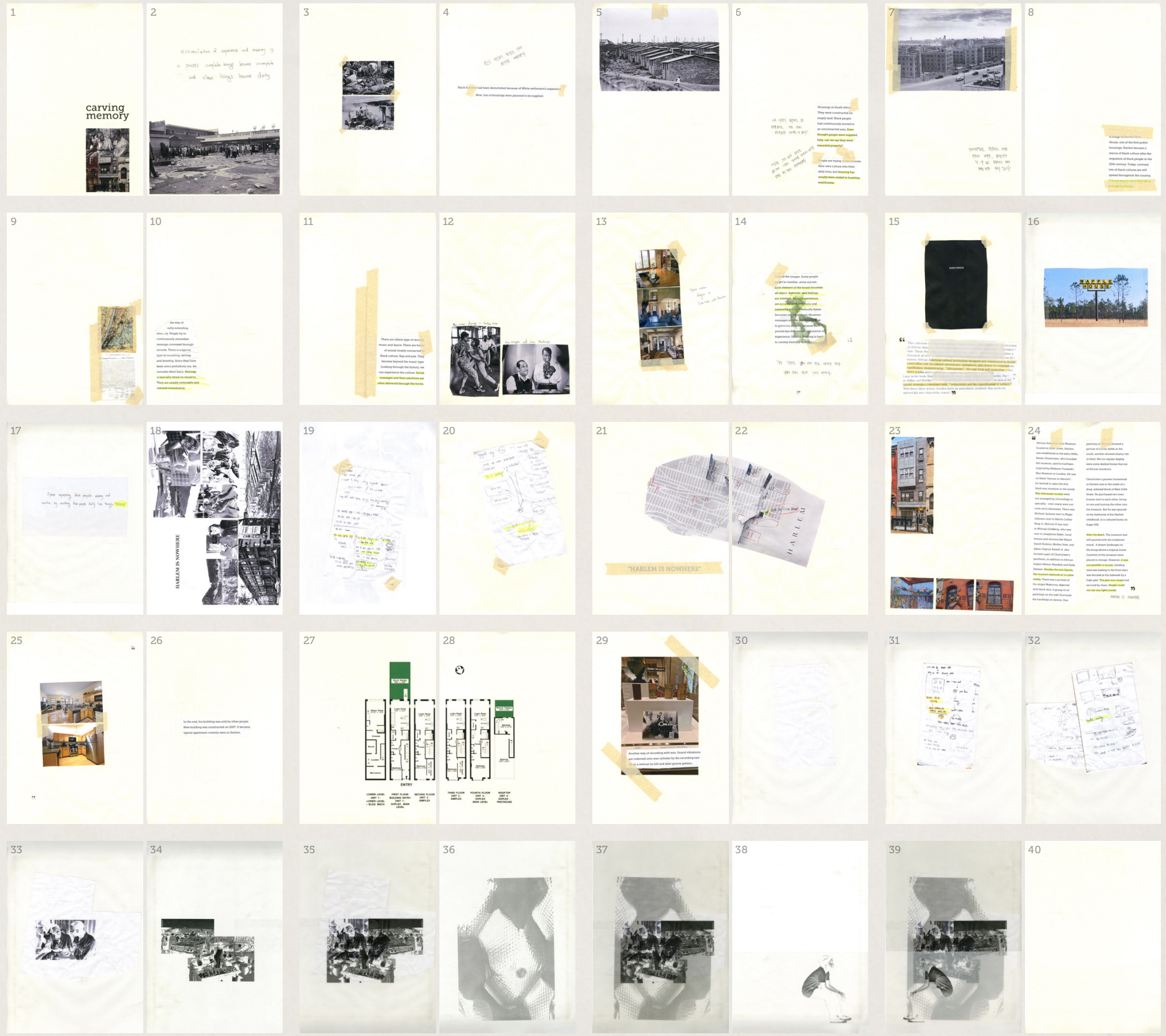


Ramp Structure



Beam Structure Connecting to Rock Climbing



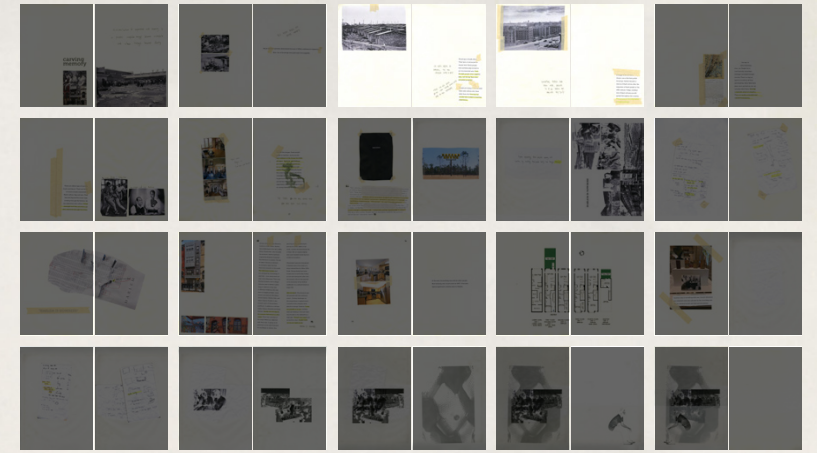


### 3. CARVING MEMORY

#### Architectural Space as Recording Memory

Year: 2023  
 Location: New York, United States  
 Type: spatial intervention  
 Category: academic project(AAD Advanced Studio VI)  
 Instructor: Ilze Wolff(Wolff Architects)  
 Role: individual work

New houses in Bantustan and Harlem; do they keep resident's precious memories?



비상 사정의 위대한 삶  
 보냈어도, 구한 안이  
 보냈어야 할 이야기 수 있나?

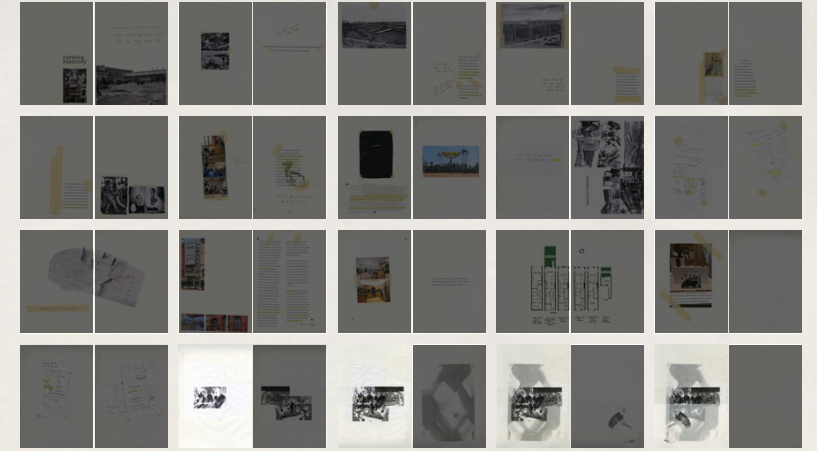
사실은 그들 삶과 연관된  
 모든 것에 대한 강제성을 부수려 하려는  
 정부는 취한 정책이었나



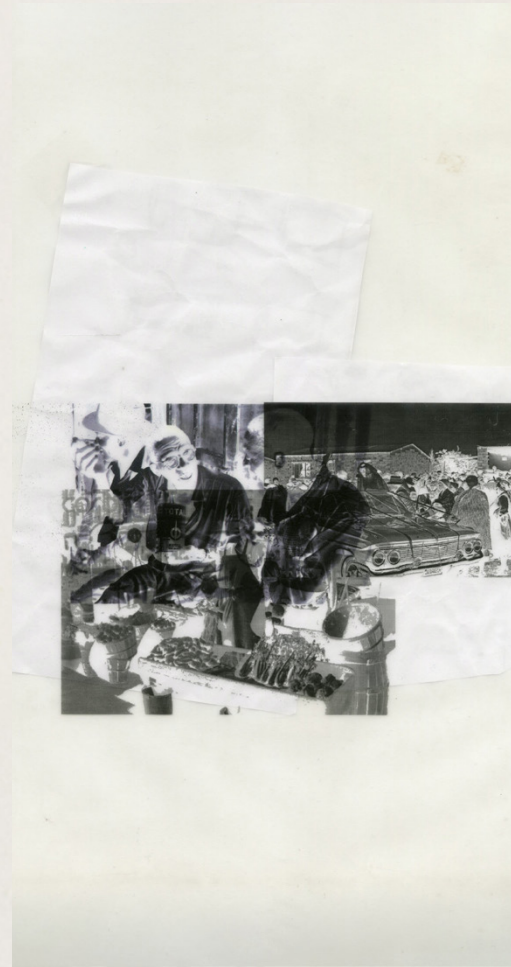
전 세계적으로 유행하는 유형  
 변형이 있지만, 본질이  
 같 수 있는 환경에서 여러  
 문화가 생겨 온다.

Row houses built as compensation for the forced migration of Black people in South Africa cannot easily replace experiences and emotions that had been formed in their hometown. While Harlem is the birthplace of diverse Black cultures, layers of cultures have been erased as time goes by. Although lots of events take place in buildings, they are not often highlighted.

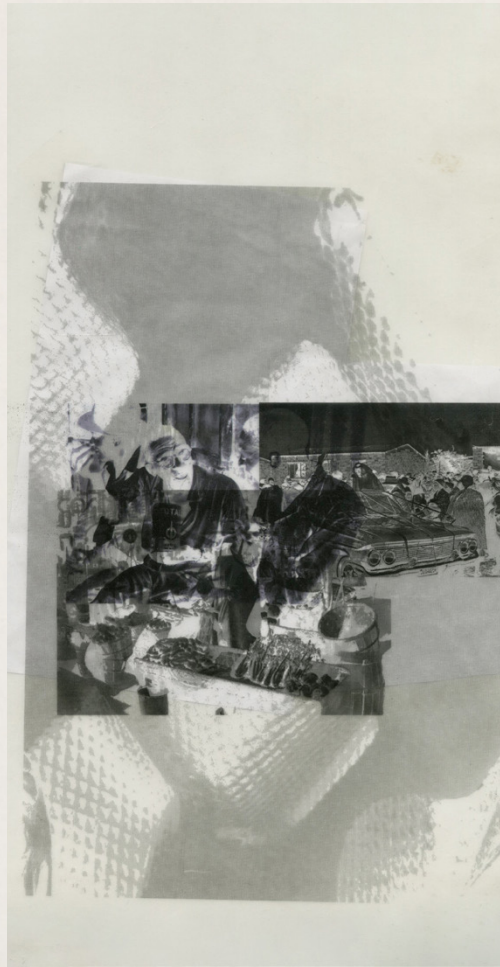
Finding new possibility; architecture as recording memory and feeling



1. A event happens



2. Various memories are layered



3. Architecture contains the memories



4. The architecture is also use by public

I focused on the role of architecture as objects that record experiences and emotions. I want to create a space that visualizes experiences and emotions. If architecture succeeds in recording people's actions and emotions, it will be intertwined with local identity easily. Urban areas can be reborn as a vibrant space, flourishing a city.

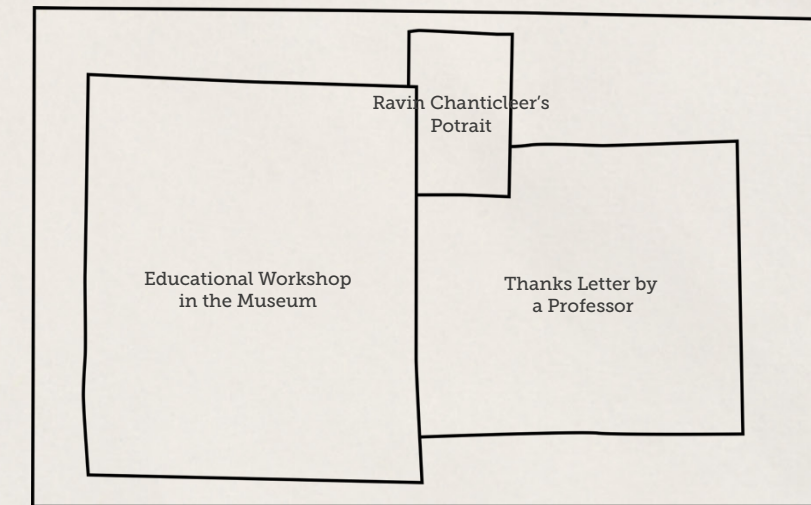
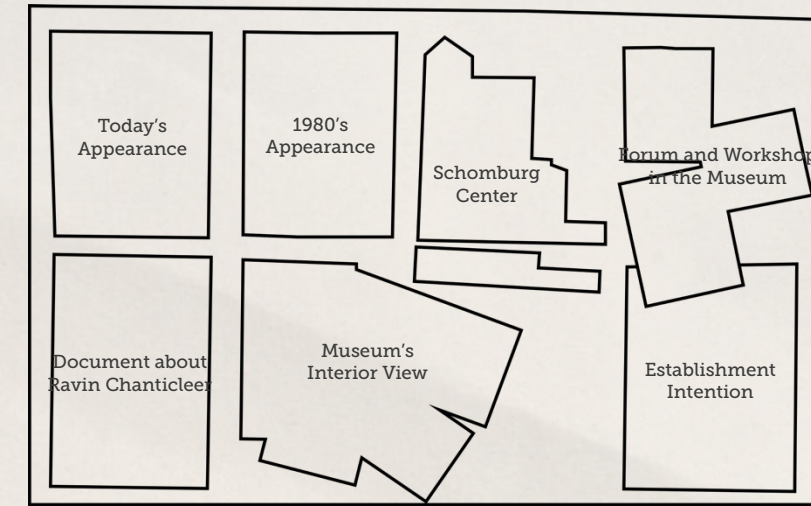
Applying the possibility; African American Wax Museum



Archives about African American Wax Museum



Commemorating memories of African American Wax Museum



316 W 115th Street in Harlem is currently a private residential apartment, but in the past, it was used as the African American Wax Museum. In 1981, Ravin Chanticleer purchased the building and made wax figures of Black Heroes to teach Harlem's citizens about Black identity. Over time, many forums and tours held in the building disappeared, leaving the building as just another building in the city.

I combine the building's history with architecture. Bringing the history out and showing it again will create cultural identity on the building, recreating memories and emotions while respecting Ravin Chanticleer. This will create another new layer of identity for new generation and cultural recollection for those who experienced the African American Wax Museum in the past.

Street Intervention; frame and case holding wax panels



Rather than creating an exhibition or a museum simply providing information about the Wax Museum, I want to create an intervention that involves the use of wax and provides a place where public can practically use it while conveying the story of Wax Museum.

The intervention is formed on 316 W 115th St's porch, and sidewalk. They are divided into a grid. Steel frames are placed following the grid where the intervention takes place. Cases are held on the frames.



Porch View



Street View



Sky View



Structures Changed according to Different Situations



Usual Day



Memorial Day



Street View



Detailed View

Adjustable Case; changing process



Adjustable Case; different uses



Chair

Wax Holder

Table

The cases are divided into permanent or temporary part. Permanent ones are horizontally hung on the frame grid so that the public can use as a bench or tabl. Temporary ones are used differently depending on different situations. On usual days, the cases can be placed anywhere for different uses. On special days, cases are hung vertically. Wax panels made in Schomburg center are held. They are used as a board to attach the archives of the Wax Museum at the Schomburg Center

# 4. ARGUMENT

## Interrogating the Way Architectural Devices and Practices Gain Collective Relevance

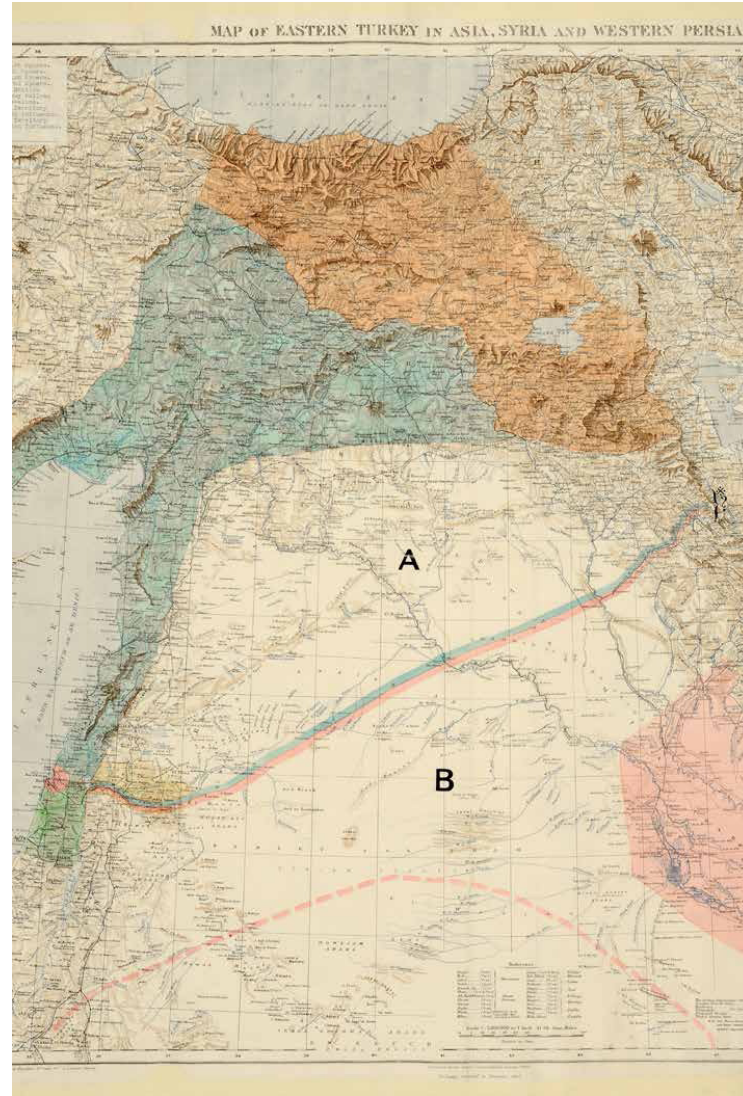
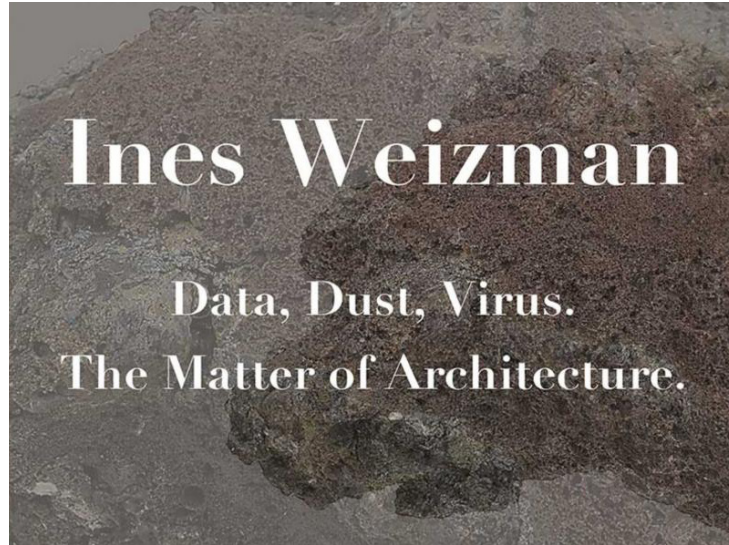
Year: 2022

Type: elective project

Category: AAD required

Instructor: Andrés Jarque and Jessica Ngan

Role: individual work



### Personal idea and Sympathy

Joo Byung Chae

As a Korean, I like watching Korean movies. A few years ago, the movie Parasite won an Oscar, and Bong Joon-ho, the director of the movie, said “The most personal is the most creative” in the acceptance speech. We all know the meaning that the most personal thing means something unique that others cannot imagine. Parasite showed some situations happened in Korea, but it gained popularity not only by Koreans but also by foreigners. Because they all know and experience similar situations in their world. So, what about architecture? Architects try to devise and apply their own notions into buildings. Sometimes the Buildings are recognized or in the spotlight worldwide. In many cases, however, most of them simply remain as just special and unique design. Then how the personal elements in architecture can be recognized by people and considered meaningful?

Today, we are living in the era of international architectural style. It does not mean the general definition we usually know, using pillars and beams as structures, and iron and concrete as materials. If a single architectural style or material is popular around the world, it sweeps the world. It's like the entertainment world. It does not only in the field of architecture, but the today's world is like this. Trends come and go quickly. As an architects, we constantly crave for new things and progress. So, trying to keep up with their needs, we are likely to gradually dig into individual territory. This is because things that came out from an individual's domain are difficult for us to experience and are not well known before, so we can feel fresh. It's personal, but somehow, we can understand and sympathize. Many things are thought to be different around the world, but what we feel through the things in our lives are oddly same. Because of this situation, personal feelings and experience can gain sympathy from many people and gain popularity.

1~3

### Addressing Ines Weizman's works and making comments

Q: I wonder how easily we can discover backgrounds when research is conducted through materials like documentary architecture. In order to know the historical background through materials, We should already get acquainted with the vast amount of knowledge in order to infer historical backgrounds through just watching materials. If so, is the acquisition of extensive knowledge through documents more important than through materials?

### Finding a Topic through Previous works

What Emanuel Admassu has been paying attention to is the culture formed by Black people who have migrated to the United States and the place formed by this specific culture. His work is not limited to the United States, but broadens to Africa. As such, today's architects do not simply design space. In the world of international architectural style, how can personal impression be applied to the architecture and acknowledged by others?

# 5. TRANSSCALARITIES

## Exploring the Agencies Architectural Devices Unfold through Transscalarconditions

Year: 2022

Type: elective project

Category: AAD required

Instructor: Andrés Jarque and Beril Sarisakal

Role: individual work

### La Escuelita

Joo Byung Chae

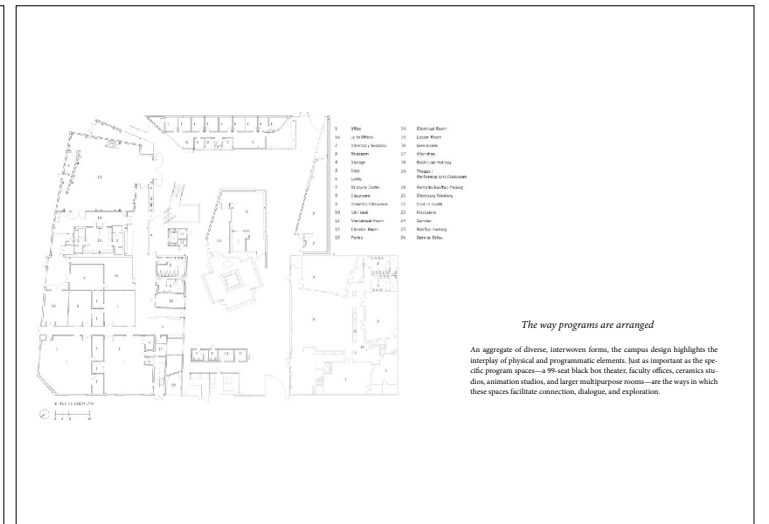
In 1976, President "Isabelita" Perón, widow of the general Juan Perón, was overthrown by a military coup d'état and placed under house arrest. Junta began persecuting and clandestinely murdering intellectuals, politicians, and others associated with the left, Peronists. Before the coup, Professors of the University of Buenos Aires focused on a collective practice involving different faculty members and students from varying levels, interests, and background, and the design problems were focused primarily on social or popular issues. However, after they are being cleaned up, the remaining faculties concentrated the studies on depoliticized issues and the teaching of modern architecture focused on structure and program became central in the curriculum.

La Escuelita, meaning little school, is an academic school of architecture existed from 1976 to 1982 in Argentina.<sup>1</sup> It was made up of a group of professors who had been expelled from the Faculty of Architecture of the University of Buenos Aires after the coup d'état of 1976. The foundation of this alternative architecture teaching group was by architects Tony Diaz, Justo Solsona and Rafael Viñoly, together with Ernesto Katzenstein. The objective was to create a discussion space for the architects of Buenos Aires and resume reflection on the problems of the discipline.

In La Escuelita, people discussed architecture with each other and design architectural projects. The teaching revolved around projects given by the four leaders: Viñoly, Solsona, Diaz, and Katzenstein.<sup>2</sup> They conducted exploratory exercises intended to challenge or

<sup>1</sup> Carranza, Luis E., Fernando Luiz Lara. Modern Architecture in Latin America. Art, Technology, and Utopia. Austin: University of Texas Press, 2015

<sup>2</sup> Ibid



### La Escuelita; a school against the government's architectural direction

Q: Should La Escuelita be viewed as a resistance to pedagogy under dictatorship, or as an answer to a desire to pursue educational, philosophical interests? Throughout the history, pedagogy has changed in accordance with the government's political view. Then, I wonder whether La Escuelita has significant meaning regardless of the situation of times.

### Inner-City Arts; an art center contributing for surrounding community

Q: Designed by Michael Maltzan, Inner-City Arts is located just east of downtown Los Angeles on the edge of Skid Row. The center provides art education for at-risk kids from LA public schools and accommodates events and lectures for reserved participants. However, when only considering the form, did the center itself really communicate and connect with the complexity of Skid Row actively?

# 6. MAKE

## Potential of Waste through Reframing

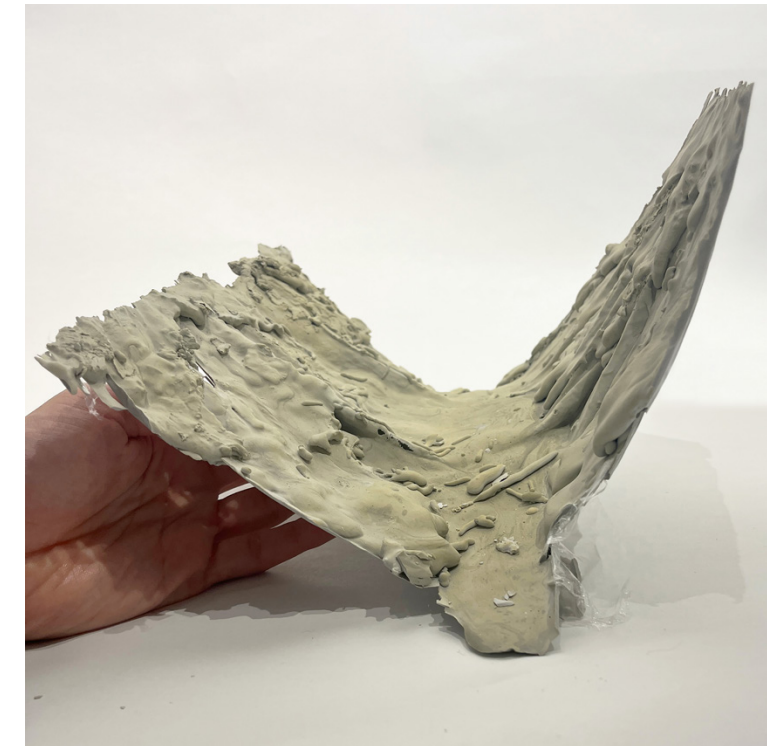
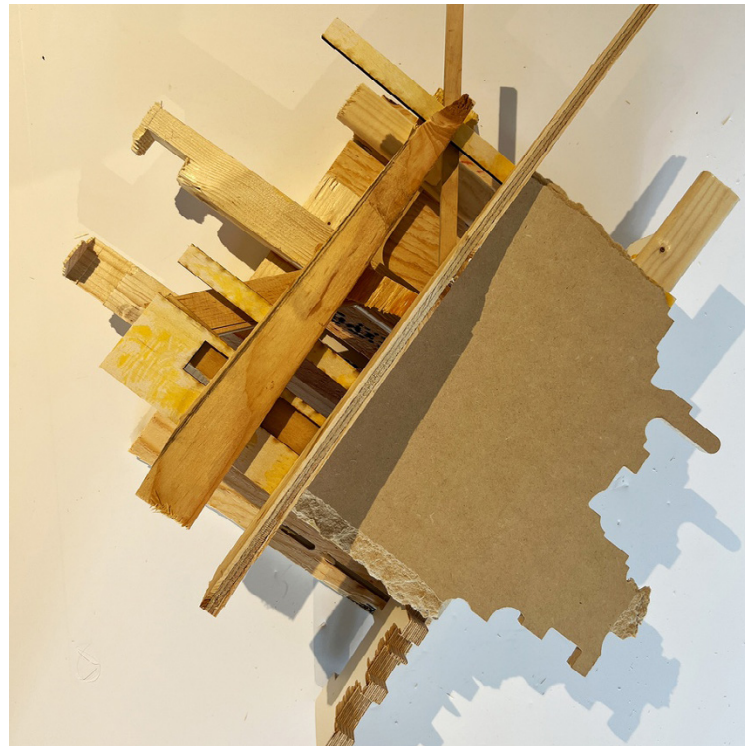
Year: 2022

Type: elective project

Category: visual studies

Instructor: Ada Tolla, and Giuseppe Lignano

Role: individual work



### 1. Wood

We've used wood as material a lot. When trying to use woods, we cut some parts of them to make construction materials. There are lots of left over after cutting. We use finely cut woods to make well organized model. So I thought the opposite way, making a space using left overs. I stacked the abandoned, left over woods. Cause I used the woods that had been cut for different purposes, they all have different shapes. So I want to see what kinds of irregular spaces are created.

### 2. Plastic

Plastic bottles are the things we have used the most in daily life. However, because of their one integral form, there are many limitations to be used for various purposes due to its difficulty in transforming. What if we make plastic bottles available to modify according to diverse purposes? I modularized plastic bottles into donut-shaped pieces and assembled them. If the plastic materials can be assembled in various sizes according to various purposes, it will also be effective to reduce plastic wastes.

### 3. Metal

I wanted to form a space using metal's character. Instead of using solid materials, I used intangible source to form a space. Imagine playing with something elastic. If we shake them repetitively, their stretched parts form a larger boundary. It is like a silhouette. Although the boundary is not tangible, I could differentiate the space where silhouette is shown compared to the other empty area. So I cut aluminum cans in spiral way. Aluminum cans looked like springs and could be dealt like that. Metal now has elasticity, aluminum cans can shrink and extend like springs. Using a bunch of cut cans, shaking up and down, they extend and shrink repetitively, making silhouette on the edge of extended cans.

### 4. Concrete

I imagined the opposite of the process of forming using concrete. We usually think of making molds, pouring concrete inside and hardening them to form walls and floors. I wondered whether concrete could be transformed freely. So I am thinking of concrete being shaped by itself. I poured concrete on plastic wrap. After the concrete had hardened to a certain extent, I floated it in the air with edges fixed. Because of the weight of the concrete, the center of flattened concrete went down, forming a valley, enclosed space.

# 7. ARCHITECTURAL PHOTOGRAPHY

## Relationship between Photography and Architecture

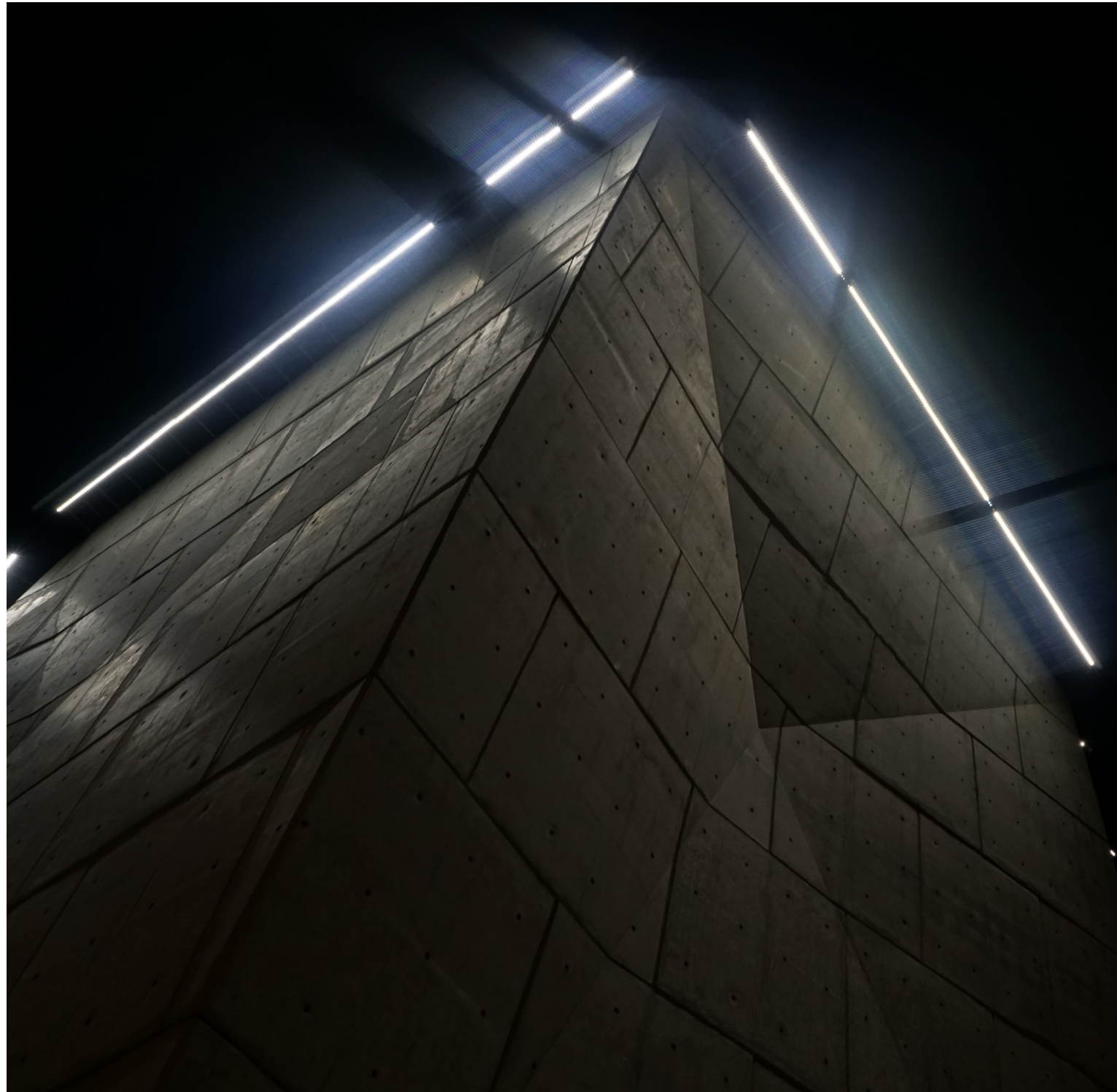
Year: 2022

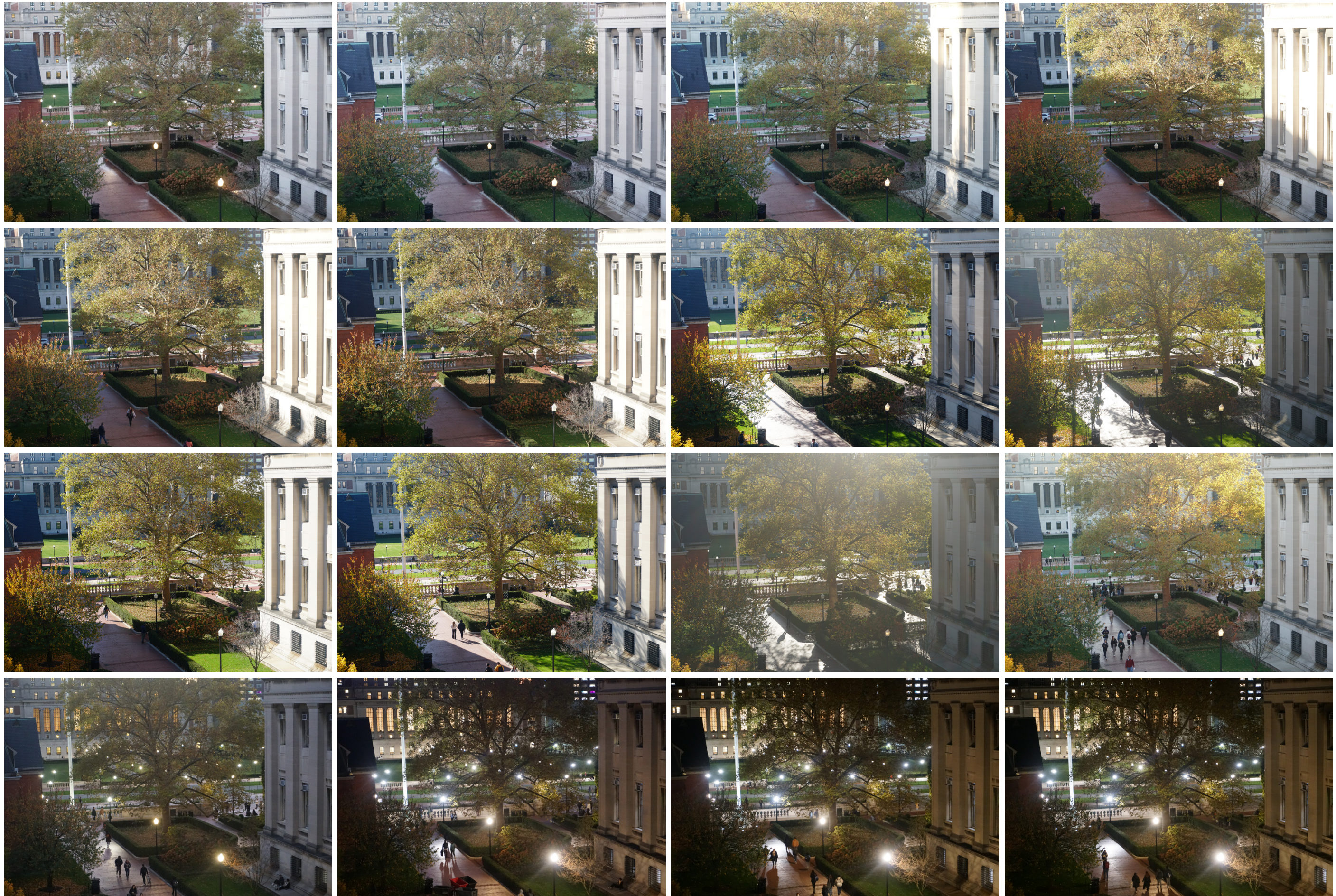
Type: elective project

Category: visual studies

Instructor: Michael Vahrenwald

Role: individual work





Assignment 2 - Examining how a space can be changed according to different times (Campus in front of Avery Hall)

# 8. THE HISTORY OF ARCHITECTURAL THEORY

## Architectural Theories What Architecture could be, should be or should not be

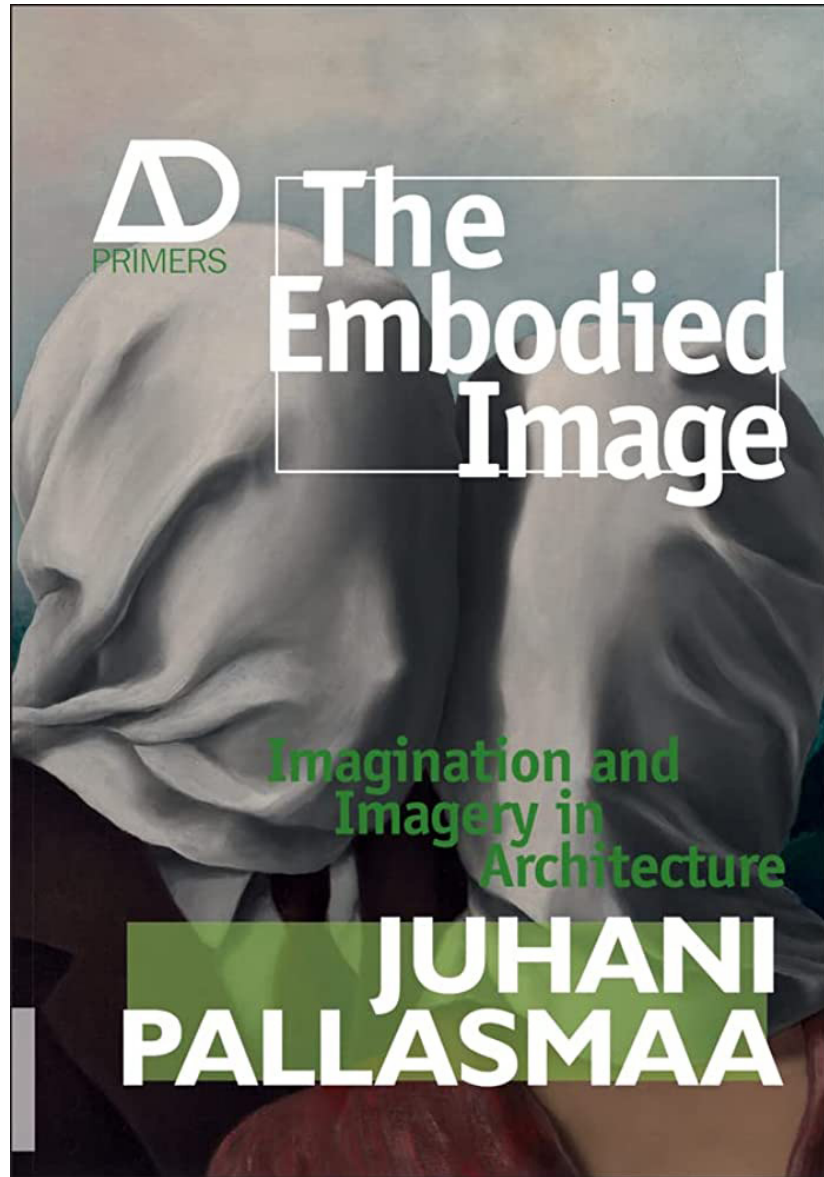
Year: 2022

Type: elective project

Category: history and theory modern

Instructor: Mark Wigley

Role: individual work



### Pursuing a Theory

Choose a piece of architectural theory and analyze how it works in exactly 15 pages. Treat the piece of theory as the only evidence you have, and subject it to forensic evidence in your lab. Always remember the basic question of the assignment: how does this particular piece of theory work? Think of it as a kind of device or mechanism, and try to see exactly how this mechanism operates, how does it try to achieve its goal.

**The Embodied Image**  
Architectural metaphor image  
Joo Byung Chae  
jc5884

*The Embodied Image*, written by Juhani Pallasmaa, talks about the scenes made by architecture, especially physical buildings. In *The Embodied Image*, he makes the claim about importance of architectural image, cultivating the future world's conditions and leading people's lives in positive way. He designates architecture, especially physical buildings, as basic modules to produce the image for carving the world. He emphasizes how big influence a building has on surroundings and people who use it and at the same time, is worried about the today's architecture not caring about the image they produce. While this may seem like a ploy for nostalgia, he is able to successfully clarify his idea by comparing the image in the past and the present's reality.

What I was interested in while reading the book was how he translated the effect of a building. It feels different than what we are used to usually suppose. The fifth chapter, "The Architectural Image," starts with the sentence we usually agonize a lot.

*"Buildings are often presented detached from their contexts of the landscape, culture, and social reality."*

In the process of architectural design, if buildings are being designed like an isolated island regardless of its surroundings, it will be criticized or not be used by local people regardless of how good or bad the buildings are. However, the things we have learned in

1

continuous flow of time, but we cannot remember all. When we try to reminisce, life is reconstructed with serial scenes. Serial scenes are not formed easily because there are too many events and actions in our lives. These are formed by specific acts he mentions. They have huge, important impact in our lives affecting constructing personality. Each scene happened in a specific space, what we call a place. While we live around it, our memories are stacked, making the place cherished. We eventually leave the area, but our memories or feelings still exist both in the place and in our minds. This is the reason why he uses 'invitation' and 'verb' towards buildings. They do not have stacked, or fixed images. They affect people forming scenes and construct different ones depending on one people.

At the same time, he is worried about the loss of architectural image these days.

*"In our time, architecture is threatened by two opposite processes: instrumentalisation and aestheticisation."*

Instrumentalisation and aestheticization. These two words seem to be opposite, but I think the effects on architecture by the two is similar. Instrumentalisation means many processes have been simplified and mass-produced, allowing construction materials and components to be produced at low prices. It leads to colorless. Regardless of the location, buildings are made of similar materials or components. It prevents us from creating special emotions and experience. For example, Starbucks uses the strategy to maintain similar interiors around the world. This gives the image of Starbucks in any store, not an image related to location. In other words, consistency through industrialization prevents us from forming a special image related to specific buildings and places.

Likewise, aestheticization means buildings tend to be constructed with luxurious and grand design. In fact, the most wanted building by people is a fancy and expensive building

3~14

GSAPP, such as equality, feminism, BLM, and environment, are topics that are being discussed globally regardless of the surrounding context, and the topics themselves can lead numerous design stories. The relationship between the topics and context is much difficult to balance. For example, if you continue to consider the context, people may not understand know what you're critically trying to discuss by simply turning into "a good design building," but if you are trying to talk about what you want to say, the topics, result have possibility not to be welcomed by surrounding people. The idea is not accepted widely and we, as architects, are struggling a lot. We know buildings should not be considered independent objects. But sometimes, when confronting iconic, or huge-scale architecture, we still forget to relate to surroundings or social reality. Because of the fact that we're pursuing the story of architecture but the world is excited about design and money is drawn from the design, we cannot overcome this gap and are becoming obsessed with designing.

He mentions, *"Architectural works are bound to be highly condensed metaphoric representation of the culture, and these metaphoric images guide and organize our perceptions and thoughts."*

Based on what he says that buildings are detached from context, 'the metaphoric presentation of the culture' means an answer by the architecture conveying architectural image produced by themselves. What are our perceptions and thoughts? I think it's probably about our attitude that is refined through metaphysical presentation.

*"Architectural images are related to specific acts and, consequently, buildings are always essentially invitations and verbs. The images can move our emotions. They (emotions) are grounded in our unconscious reactions and biological historicity."*

Images, not only architectural ones, can arouse our reaction. Our life is the

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style. Through the principle of capitalism, profit, and efficiency, uniformed building spaces without thinking about the environment and people appear. the detailed designs of building elements followed the basic designs of producing companies. Juhani's idea seems like the background of post-modernism. Numerous architectural notions in post-modernism, such as vernacular architecture, emerged while criticizing modernism's inhumane architectural environment. However, 2011, when this book was published, is the day after decades the idea first came out. I think it keeps saying the obvious things are considered facts these days. Looking at the history of modern architecture, I wonder if we can achieve what the artist claims in the era. Modernism appeared with the development of technology to fulfill people's living conditions who cannot even keep their basic residential environment. After, Post-modernism emerged arguing modernism cannot satisfy living like a human being. We are studying and examining the latter idea, but the world is still struggling between two ideas. Anyway, this book is meaningful in that it can alert modern people, including me, who live the world with a materialistic perspective and makes us think again about what it means to be at home, or living literally.

I finished this essay with his interesting words. He spoke of the paradox of the perfect house in terms of architectural image.

*"All things that live there are certain irregularities and deficiencies, which are not only signs of life but sources of beauty. A strong image has minimal tolerance for change and consequently contains an inherent aesthetic vulnerability in relation to the forces of time. On the other hand, a weak gestalt allows additions and alteration."*

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# 9. RE-THINKING BIM

## Digital Practice Approaching Aspects of Development, Architecture, Engineering, and Construction

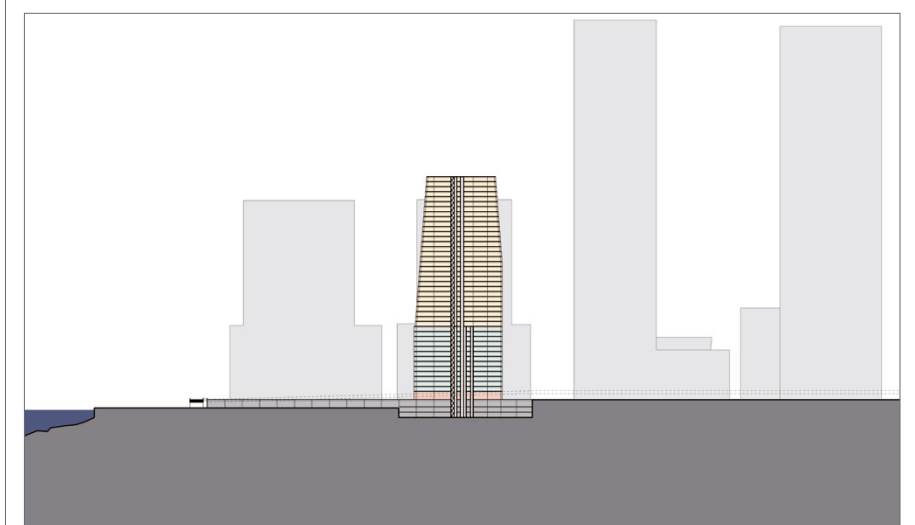
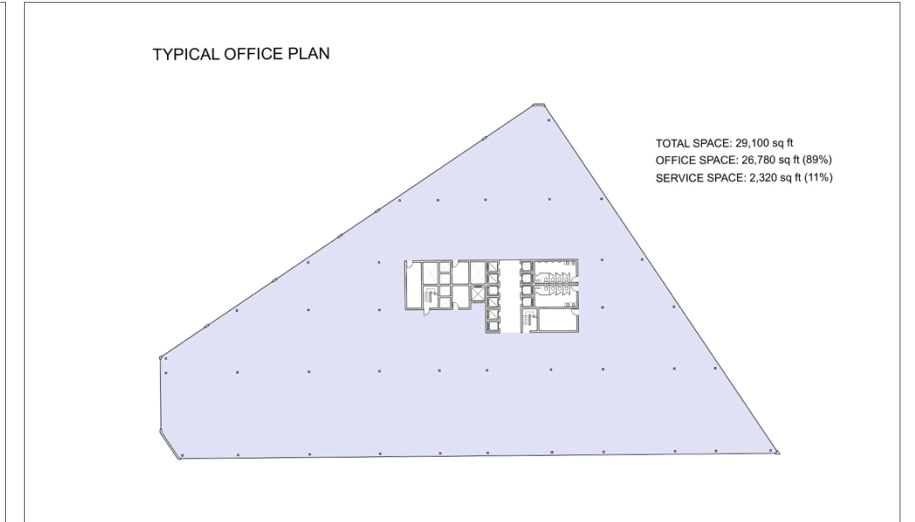
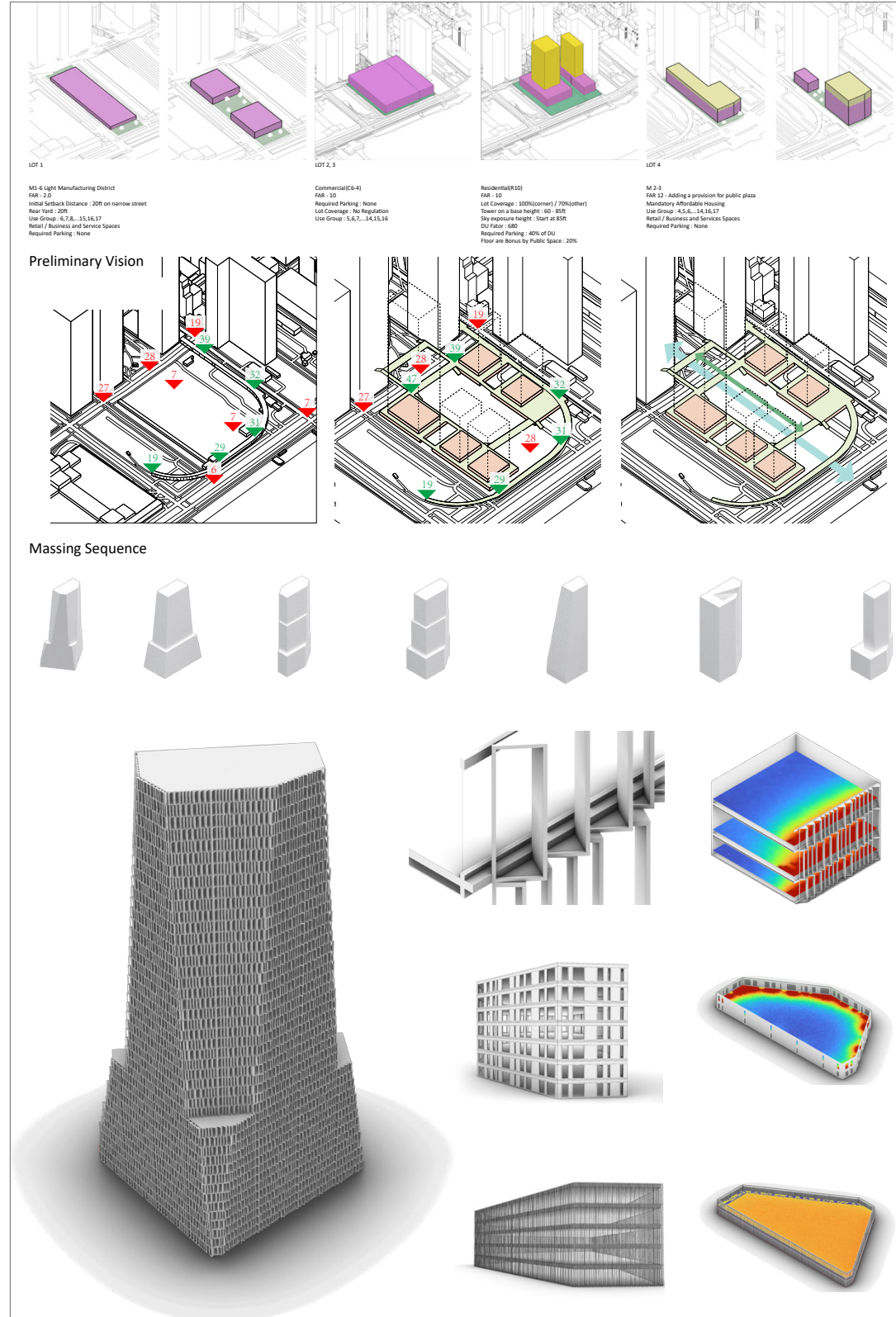
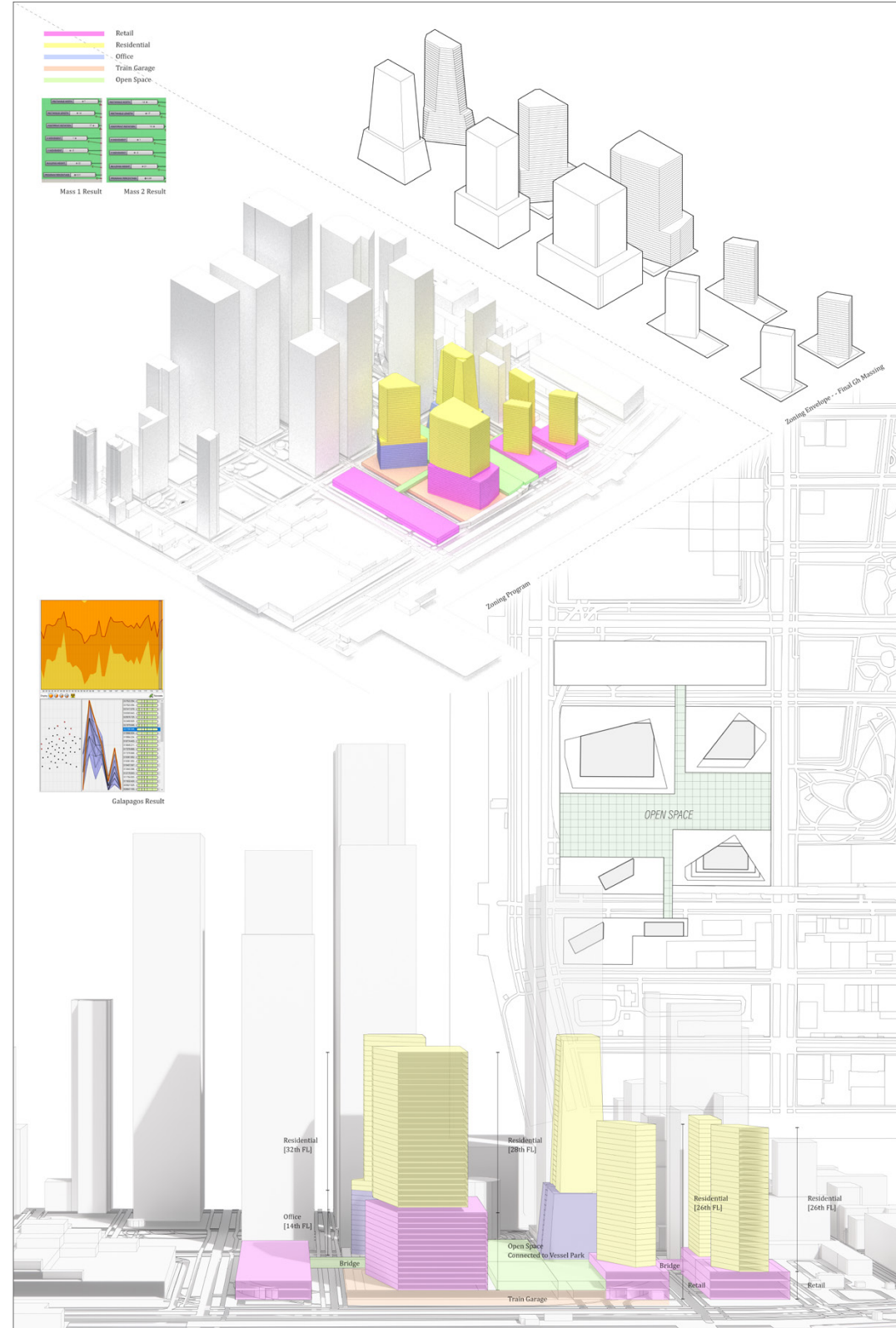
Year: 2023

Type: elective project

Category: building science and technology

Instructor: Joseph Brennan

Role: group work Brandon Gil, Huifeng Zhang, Juwan Nam, and Vishal Benjamin





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